

U.S. Department of the Interior Bureau of Land Management

**Decision Record
Finding of No Significant Impact
Environmental Assessment
DOI-BLM- NM- 0060- 2016- 2 - EA January 2016**

Hot Tap to Helium Pipeline and Connected Actions by IACX Energy

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Project: Crude Helium Pipeline Hot Tap and Connected Actions by IACX Energy
EA Log Number: DOI-BLM- NM- 0060- 2016- 2 - EA
Location: Otis, Rush County, Kansas

Finding of No Significant Impact

Based on the analysis of the potential environmental impacts of the proposed action in the attached Environmental Assessment, I have determined that the proposed alternative to install a hot tap into the federal helium pipeline and connected actions by IACX is not expected to have significant impacts on the environment and that preparation of an Environmental Impact Statement is not required.

We have looked for endangered and/or listed species at the site of the proposed action and did not find any. We consulted with local, state and federal wildlife experts to determine if they are aware of the existence or possibility of existence of endangered and/or listed species at this site or in the area and were assured that they are not aware of any. We reviewed the area proposed for installation of a 3-inch pipeline, mostly along an existing county road and through undisturbed pasture land, but could find no effects. Therefore, based on careful analysis of the situation, the need to facilitate pipeline operations and the relatively small disturbance to pasture lands resulting from the pipeline installation connected to the hot tap, the development of an Environmental Impact Statement is not necessary.

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Table of Contents

Finding of No Significant Impact	2
1.0 INTRODUCTION	2
1.1 Background	3
1.2 Location.....	3
1.3 Purpose and Need for Proposed Action	4
Proposal Purpose	4
Need for Proposal	4
1.4 Decision to be Made	4
1.5 Land Use Plan Conformance	5
1.6 Relationship to Statutes, Regulations or Other Plans.....	5
1.7 Scoping, Public Involvement and Identification of Issues.....	7
2.0 PROPOSED Action and alternatives	8
2.1 No Action	8
2.2 Proposed Action	8
3.0 Affected Environment	9
3.1 Ecosystem Description	10
3.2 Wildlife	11
3.2.1 Threatened and Endangered Species.....	12
3.2.2 Special Status Species	12
3.2.3 Migratory Birds	13
3.3 Noxious Weeds and Invasive Species	13
Mitigation	13
3.4 Archaeological Review	13
4.0 Environmental Consequences	15
4.1 Effects from No Action	15
4.2 Effects of Proposed Action on Ecosystem and Mitigation Measures	15
Mitigation to Ecosystem.....	17
4.2.1 Socioeconomic Effects of Proposed Action	17
4.2.2 Process Changes Anticipated at Otis, Kansas Plant.....	17
4.3 Wildlife	17

Mitigation Common to All Species	17
4.3.1Threatened and Endangered Species.....	18
<i>Mitigation</i>	18
4.3.2 Migratory Birds	18
<i>Mitigation</i>	18
4.4 ARCHAEOLOGICAL EFFECTS.....	18
4.5 Cumulative Effects.....	20
5.0 CONSULTATION/Coordination	20
6.0 REFERENCES.....	21

1.0 INTRODUCTION

This Environmental Assessment (EA) has been prepared to analyze the potential for environmental impacts and to develop a decision process related to installation of a hot tap proposed by IACX Energy into the federally owned and managed crude helium pipeline near Otis, Kansas. The assessment includes procedures for mitigating disturbances resulting from installation of a small 3-inch diameter pipeline to transfer the crude helium extracted from the federal helium pipeline through the hot tap. The helium is proposed to be transferred to an existing natural gas processing plant that will be modified to process the crude helium into market-acceptable helium. The assessment analyzes potential environmental impacts that could result with the implementation of either the *Proposed Action* or the expected situation if *no action* is taken to install the hot tap as requested by IACX Energy. This EA provides analysis and documentation that complies with the National Environmental Policy Act (NEPA). In addition, the EA provides evidence for determining whether the BLM will make a “Finding of No Significant Impact” (FONSI). *Attachment 1* provides a satellite image and location maps for the area in Kansas where this proposed action will take place.

A FONSI is a document that briefly presents the reasons why implementation of the preferred alternative would not result in significant environmental impacts beyond those already addressed in the Texas Resource Management Plan (Texas RMP) (BLM 1996). As defined by the Council on Environmental Quality (CEQ), the significance of a Federal action is determined by the context of the action in relation to the overall project setting, as well as the intensity of direct, indirect and cumulative effects resulting from the project. If the BLM determines that the preferred alternative would not result in significant impacts, a Decision Record (DR) and FONSI would be prepared approving the selected alternative. If the project is found to result in significant impacts, an Environmental Impact Statement (EIS) would be prepared.

1.1 Background

The U. S. Department of the Interior, Bureau of Land Management (BLM) Amarillo Field Office (AMFO) operates and maintains the only government helium storage reservoir, plant, and pipeline system in the country and supplies over 40 percent of domestic demand for helium. The BLM supplies crude helium to private helium refining companies which in turn refine the helium and market it to consumers.

The BLM is also responsible for evaluating the nation's helium-bearing gas fields and providing responsible access to Federal land for managed recovery and disposal of helium. The Federal Helium Program is administered by the BLM's Amarillo Field Office under the authority of the Helium Stewardship Act of 2013.

The BLM, in conjunction with private industry, have built a Crude Helium Enrichment Unit (CHEU) at the Cliffside site, northeast of Amarillo, Texas. The unit processes about 20 million cubic feet per day of natural gas, and about 2 billion cubic feet per year, accounting for 42 percent of the domestic demand for helium and 35 percent of the global demand. Gas from the Bush Dome reservoir is sent to the CHEU where it is enriched to about 80 percent helium and is then added to the pipeline for delivery to privately owned plants. Helium-rich gas from the reserve is transported along a 424-mile pipeline to ten privately owned crude helium plants and six privately owned pure helium refineries in Oklahoma and Kansas.

The BLM operates and maintains a helium storage reservoir, enrichment plant, and pipeline system near Amarillo, Texas. There remains approximately 11 billion cubic feet (Bcf) of helium unsold in the Reserve. Congress authorized continued operation of the Reserve by passing the Helium Stewardship Act (HSA). The intent of the HSA is to allow for a smooth transition to private means of helium production (both domestic and international) as the Reserve is steadily drawn down.

Helium is considered a strategic resource because it is needed to supply the military, industrial uses, and essential civilian needs. Helium is an essential resource for the aerospace industry; computer chip and optical fiber manufacturing; for medical uses including magnetic resonance imaging (MRI) magnet cooling, lung tissue visualization, heart catheterization methods, and medical lasers; aluminum helium arc welding; and scuba diving mixtures. Helium is also used in national defense applications such as rocket engine testing, scientific balloons and blimps, surveillance devices, air to air missile guidance, and systems testing. The most recognized uses for helium gas are party and parade balloons; however, these make up a very small percentage of the overall demand for helium. For many of these uses, there is no substitute for helium.

1.2 Location

The Crude Helium Pipeline was constructed in the early 1960s, as discussed in the NEPA Texas RMP prepared and approved via ROD and FONSI in 1996. The proposed tap into the helium

pipeline is located in Rush County, in central Kansas. Please see *Attachment 2* showing a recent satellite view of the proposed location of the hot tap and the traverse of the proposed 3-inch low-pressure pipeline that IACX Energy proposes to install to transfer the crude helium from the federal helium pipeline to their processing facility.

1.3 Purpose and Need for Proposed Action

Proposal Purpose

The purpose of the proposed action is to accommodate the transfer of helium gas from the BLM-operated and maintained federal helium pipeline by installation of a “hot tap.” The hot tap will allow helium to be transferred as requested by IACX Energy, to a pipeline that they will design and build. The helium will then be processed to market-grade quality and IACX will sell the helium. *Attachment 3* shows the approximate location for the hot tap construction on the federal helium pipeline.

The BLM National Environmental Policy Handbook (H-1790-1) provides guidance to comply with National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500 through 1508 and the Department of Interior’s NEPA manual. This guidance on the NEPA process is intended to help BLM officials make decisions that are based on understanding of environmental consequences and to take actions that protect, restore, and enhance the environment (40 CFE 1500.1(c). This guidance will be applied to analyze the potential for environmental impacts at the BLM-operated helium pipeline and associated connected actions, to determine if an Environmental Impact Statement is required. As part of the review of the proposed action, State and Federal agencies possessing special expertise and/or jurisdiction in the management of particular resources or species have been consulted to provide the advice regarding potential impacts.

Need for Proposal

We are proposing to install a hot tap into the federally owned and operated helium pipeline. This proposed action is both encouraged and allowed by the Federal Helium Act of 1996 and the recent Helium Stewardship Act of 2013. This proposal is developed to comply with the requirements of NEPA and the BLM National Environmental Policy Handbook facility to provide Helium at a steady rate so that the requirements of the 1996 Helium Privatization Act are met, contractual obligations are fulfilled, and global helium needs are provided for.

1.4 Decision to be Made

The BLM will decide whether or not to approve the hot tap into the federal helium pipeline and facilitate the connected actions related to IACX construction of a 3-inch pipeline and upgrades to its existing natural gas processing facility to process helium for the market sales.

1.5 Land Use Plan Conformance

The proposed action is subject to and has been reviewed for conformance with NEPA's coordination of planning requirements under 43 CFR 1610.5, BLM 1617.3 and as documented in the Texas Resource Management Plan (RMP) (May 1996), as amended. The Texas RMP and associated Record of Decision describe management decisions based on resource and surface management ownership areas. At the time of preparation and development of the RMP the Amarillo Helium Operations Office was a part of the Department of Interior, Bureau of Mines (BM). At the dissolution of the BM, the Amarillo Helium Operations Office was transferred to the BLM. Transfer of the Helium Operations Office in Amarillo from the jurisdiction of the BM to the BLM resulted in the need to amend the Texas RMP. The Texas RMP was amended in 2000 to include the AMFO.

The Texas, Oklahoma and Kansas Resource Management Plan (RMP) is currently being updated and recent reference material is available to the public at the following website:

http://www.blm.gov/nm/st/en/fo/Oklahoma_Field_Office/fo_planning/okt_rmp.html

The "*Biological Baseline Report*" was posted to the website in May 2015 and identifies and characterizes biological issues in the areas that may be impacted by implementation of the RMP. The report provides a general overview of conditions in the region and the local area and will help inform impact analysis related to this proposed action.

1.6 Relationship to Statutes, Regulations or Other Plans

The following is a list of statutes that may apply to a proposed action:

- **Archaeological and Historic Preservation Act of 1974 (16 USC 469)** - Provides for the preservation of historical and archeological data (including relics and specimens) which might otherwise be irreparably lost or destroyed as the result of (1) flooding, the building of access roads, the erection of workmen's communities, the relocation of railroads and highways, and other alterations of the terrain caused by the construction of a dam by any agency of the United States, or by any private person or corporation holding a license issued by any such agency or (2) any alteration of the terrain caused as a result of any Federal construction project or federally licensed activity or program.
- **Archaeological Resources Protection Act of 1979, as amended (16 USC 470 et seq.)** - Secures, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals.
- **Clean Air Act of 1970, as amended (42 USC 7401 et seq.)** - Defines EPA's responsibilities for protecting and improving the nation's air quality and the stratospheric ozone layer.

- **Clean Water Act of 1977, as amended (30 USC 1251)** - Establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.
- **Endangered Species Act of 1973 (16 USC 1531 et seq.)** - Protects critically imperiled species from extinction as a consequence of economic growth and development untempered by adequate concern and conservation.
- **Helium Stewardship Act of 2013**
- **Migratory Bird Treaty Act of 1918 (16 USC 703-712)** - Implements the convention for the protection of migratory birds.
- State- and federal-listed species are protected in Kansas by the Kansas Nongame and Endangered Species Conservation Act of 1975. The act places the responsibility for identifying and undertaking appropriate conservation measures for listed species directly on the Department of Wildlife, Parks, and Tourism. This is enforced through Chapter 32 Article 9, Sections 32-957 through 32-963, 32-1009 through 32-1012, and 32-1033 and regulations. Regulations require the Department of Wildlife, Parks, and Tourism to issue special action permits for activities that affect species listed as threatened or endangered in Kansas.
- Article 13 of the Kansas Agricultural Statutes, the Kansas Noxious Weed Law (KDA 2013), defines noxious weeds in the state and outlines control and management actions. The Kansas Department of Agriculture listed noxious weeds in 2003 (NRCS 2014b).
- **Mining and Mineral Policy Act of 1970, as amended (30 USC 21)** - Fosters and encourages private enterprise in the development of economically sound and stable industries, and in the orderly and economic development of domestic resources to help assure satisfaction of industrial, security, and environmental needs.
- **National American Graves Protection and Repatriation Act of 1990 (25 USC 301)** - Provides a process for museums and Federal agencies to return certain Native American cultural items such as human remains, funerary objects, sacred objects, or objects of cultural patrimony to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations and includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on Federal and tribal lands, and penalties for noncompliance and illegal trafficking.
- **National Historic Preservation Act of 1966, as amended (16 USC 470)** - Preserves historical and archaeological sites.

1.7 Scoping, Public Involvement and Identification of Issues

The BLM publishes a NEPA log for public inspection. This log contains a list of proposed and approved actions related to the field office. The log is located in the Amarillo Field Office as well as on the BLM New Mexico website

(http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html).

AMFO uses topographic and satellite image maps to display resources in the area and to identify potential issues. Internal scoping was conducted by reviewing the proposed project and locations to identify potentially affected resources and land uses. The Interdisciplinary Team (IDT) identified resources and land uses present and affected by the proposed project and focused the analysis on those issues. The following questions were raised as issues to consider further:

- What effect *will* the proposed action have on the habitat?
- What effect *will* the proposed action have on other species that rely on the habitat?
- What effect *will* the proposed action have on known and newly discovered artifacts or areas of cultural, paleontological, and archeological significance?
- What effect *will* the proposed action have on Migratory Bird species? What effect *will* the proposed action have on wildlife and their habitat in general?
- What effect will the proposed connected action have on floodplains, watershed, water quality and quantity, as well as wetland and riparian areas?
- What effect will the proposed connected action have on socioeconomics?
- What effect will the proposed connected action have on livestock grazing?
- What effect will the proposed connected action have on non-native species?

Several issues were considered during project scoping but dismissed from detailed analysis because there would be no potentially significant effects related to the issues resulting from any of the alternatives presented below. The following elements are determined by the IDT, following onsite visits, review of the Texas RMP (1996), as amended and other data sources, to not be present:

- | | |
|----------------------------------|--------------------------|
| • Environmental Justice | • Wild and Scenic Rivers |
| • Areas of Environmental Concern | • Wilderness |
| • Wild Horse and Burros | • Cave and Karst |
| • Recreation | • Hazardous Wastes |
| • Mineral Resources | • Visual Resources |
| | • Climate Change |

2.0 PROPOSED ACTION AND ALTERNATIVES

This EA analyzes the impacts of *No Action* and the *Proposed Action* and related connected action to install a hot tap into the federal helium pipeline near Otis, Kansas and allow metered flow of the helium enriched gas to be transferred to a private sector pipeline to be constructed by ICAX Energy. IACX will install a 3-inch diameter low pressure gas steel gas pipeline from the hot tap location to their existing natural gas processing plant located west of Otis. The total length of the pipeline is 2.75 miles from the hot tap to the gas processing plant, as shown on *Attachment 2*. Approximately three-quarters of the pipeline will follow an existing county-maintained dirt road, as indicated by the yellow traverse line from the proposed hot tap to the IACX facility.

2.1 No Action

CEQ regulations require the consideration of *No Action* (40 CFR 1502.14). The BLM NEPA Handbook (H-1790-1) states that EAs on externally initiated proposed actions, a no action alternative generally means that the action would not take place. Under this alternative, the BLM would not authorize the hot tap into the federal helium pipeline. The proposed transfer of the helium into the requested private-sector operated 3-inch diameter pipeline to allow the helium to be processed and marketed by a private company would not take place. The non-action would result in refusal of a request by a valid private-sector natural gas processing company to extract crude helium and process it and market it. The refusal to facilitate these proposed actions connected to the hot tap proposal would result in violation of the BLM mandate to comply with the intent of the 1996 and 2013 helium legislation by the U.S. Congress.

2.2 Proposed Action

The *Proposed Action* is to install a hot tap into the federal helium pipeline near Otis, Kansas as requested by the IACX Energy. The hot tap will allow IACX to extract helium from the federal pipeline and transfer it via a small 3-inch diameter low-pressure pipeline that they will design and build. The extracted helium will be processed at an existing natural gas processing facility that will be modified to process the crude helium and refine it to meet market-based specifications and needs. The proposed action to build the 3-inch pipeline and modify the natural gas processing facility to accommodate helium is considered a “connected action” under NEPA. The BLM NEPA Handbook (H-1790-1) provides the following guidance:

“Connected actions are those actions that are closely related” and “are connected if they automatically trigger other actions that may require an Environmental Impact Statement (EIS); cannot or will not proceed unless other actions are taken previously or simultaneously; or if the actions are interdependent parts of a larger action and depend upon the larger action for their justification (40 CFR 1508.25 (a) (i, ii, iii).” In addition, connected actions are limited to actions that are currently proposed (ripe for decision).

Actions that are not yet proposed are not connected actions, but may need to be analyzed in cumulative effects analysis if they are reasonably foreseeable.”

Since the BLM proposed hot tap into the federal helium pipeline is directly related to the proposed construction of the IACX helium gas transfer pipeline to its modified natural gas processing facility, NEPA requires the development of alternatives and mitigation measures for both actions (40CFR 1508.25 (b), and the analysis of direct, indirect and cumulative effects of both actions (40 CFR 1508.25 (c).

3.0 AFFECTED ENVIRONMENT

This section describes the environment that would be affected by implementation of the proposed action described in Section 2. Aspects of the affected environment described in this section focus on the relevant resources and issues that need consideration in relation to the proposed action. Certain critical environmental components require analysis under BLM policy. Only those elements of the affected environment that have potential to be impacted are described in detail. In this case, the context of the proposed action for hot tap into the federal helium pipeline and the connected action is along approximately 2.75 miles of new pipeline installation. *Attachment 2* provides a satellite photo of the helium pipeline location for the hot tap and connection to the proposed 3-inch pipeline installation to transfer the helium to an existing, modified natural gas processing facility. The proposed pipeline, as seen on map attachment, shows the pipeline will be installed for approximately one and three-quarter miles along an existing county road. The remaining one mile will take the pipeline through pasture land. Analysis of the intensity of the proposed action may be construed in relation to the broad base of surrounding farmland that can be seen in *Attachments 1, 2 and 3* showing that habitat primarily is controlled by the private land owners.

The 1996 RMP is currently being updated and a *Biological Baseline Report* was released in May 2015, developed as part of the *Joint Environmental Impact Statement and BLM Resource Management Plan and BIA Integrated Resource Management Plan*. This report provides an excellent resource reference that is up-to-date and identifies and characterizes biological issues in the area that may be impacted by implementing RMP-related activities. The federal helium pipeline is operated by the BLM and is incorporated in the RMP update.

The *Biological Baseline Report* provides potential direct and indirect impacts, a summary of laws and regulations governing management of biological resources, as well as a brief description of fish, wildlife, migratory birds, raptors and special status species in the Area of Potential Impact (API). The planning area for the RMP is Oklahoma, Kansas and Texas, regardless of land ownership. Therefore, we can cite the references, guidelines and relevant material to assist us in the decision process for this proposed action in Kansas.

3.1 Ecosystem Description

The federal helium pipeline crosses three different ecoregions based on US Environmental Protection Agency (EPA) Level III ecoregions (Woods et al. 2005; Chapman et al. 2001; Griffith et al. 2004; USEPA 2013). The ecoregions include the Southwestern Tablelands in the Panhandle of Texas, the High Plains in Western Texas, Oklahoma and Kansas and the Central Great Plains covering central Texas through central Oklahoma and central Kansas. The proposed project area for the hot tap and the connected pipeline and processing plant changes are in the *Great Central Plains ecosystem*.

State regulations for endangered or threatened species in Kansas are provided protection by the Kansas Nongame and Endangered Species Conservation Act of 1975. The act places the responsibility for identifying and undertaking appropriate conservation measures for listed species directly on the Department of Wildlife, Parks, and Tourism. This is enforced through Chapter 32 Article 9, Sections 32-957 through 32-963, 32-1009 through 32-1012, and 32-1033 and regulations. Regulations require the Department of Wildlife, Parks, and Tourism to issue special action permits for activities that affect species listed as threatened or endangered in Kansas.

Kansas state regulations for noxious weeds are found in Article 13 of the Kansas Agricultural Statutes, the Kansas Noxious Weed Law (KDA 2013), defines noxious weeds in the state and outlines control and management actions. The Kansas Department of Agriculture published a list of noxious weeds in 2003 (NRCS 2014b).

According to the *Biological Baseline Report*, much of western Kansas falls into the “Central Great Plains (27). The Central Great Plains is slightly lower in elevation, receives more precipitation, and is somewhat more irregular than the High Plains (25) to the west. Much of this ecological region is now cropland that was once grassland with scattered low trees and shrubs. In the planning area, it occupies much of central Oklahoma and Kansas and a portion of north-central Texas.” In the Otis, Kansas area much of the land is cropland. The area has been disturbed and impacted by roads, oil wells, transmission lines, and incorporated area near the town of Otis and is not expected to contain key habitats as defined in the *Biological Baseline Report* (page 2-8).

Kansas also designates key habitats in its Comprehensive Wildlife Plan (Wasson et al. 2005). They are identified within each larger conservation region of the state (e.g., short-grass prairie, mixed-grass prairie, and tall-grass prairie conservation regions) and are based on the land cover types in the Final Report of the Kansas GAP Analysis Project (Wasson et al. 2005). The proposed project area lies in Rush County, Kansas and according to the *Biological Baseline Report*, few surveys or monitoring studies specific to BLM lands are available because of the “scattered land management patterns.” There are no wildlife management areas, wildlife refuges or state parks included in the proposed area.

3.2 Wildlife

The *Biological Baseline Report* for the RMP update provides a summary of wildlife and fish in the planning area and within the 19 different ecoregions. Kansas Central Great Plains ecosystems were once grassland with scattered low trees and shrubs; however much of this ecological region is now cropland. Wildlife in this Central Great Plains ecosystem provides key habitat for mammals, waterfowl, reptiles, amphibians and other wildlife. Key species identified in the Report that could be found in the project area in Rush County, Kansas include the following:

- Birds of conservation concern: burrowing owls, ferruginous hawk, mountain plover
- Federal-listed threatened: Lesser prairie chicken- “Its distribution and abundance have declined due to habitat loss, degradation, and fragmentation caused by conversion of native rangelands to cropland, the spread of invasive species, and cumulative habitat degradation caused by inappropriate livestock grazing, energy development, woodland spread due to fire suppression, and structural and transportation developments. Additionally, collisions with stock fences represent a leading cause of mortality of lesser prairie chicken. Populations are estimated at approximately 20,000 to 30,000 in Kansas.”
- Black-tailed prairie dogs provide important habitat and feeding grounds for other species, including the endangered black-footed ferret. This species uses prairie dog burrows for shelter and depend on prairie dogs as a food source. Activities that affect black-tailed prairie dog populations or habitat may also affect black-foot ferrets (USFWS 2013a).

Continuing threats to native ecosystems and species diversity in the planning area are fragmentation and loss of critical or important habitat due to human activities. This proposed action will not result in

Adrian Escobar, BLM Amarillo Field Office’s Natural Resource Specialist and Environmental Coordinator contacted Jason Wagner, the Kansas Department of Wildlife, Parks and Tourism Area Wildlife Biologist at the Hays, Kansas Regional Office to guide us with respect to potential biological impacts by pipeline installation activity in the Otis, Kansas area. Mr. Wagner informed Mr. Escobar in an email dated November 17, 2015, that “the only species of concern in that area would be the lesser prairie chicken. The pipeline would be on the very edge, within a mile of the boundary, of the estimated occupied range. However, it would fall into the CHAT 4, modeled non-habitant.” In addition, Mr. Wagner observed that the pipeline is proposed to be installed in an area that is already impacted by development of roads, transmission lines and the town of Otis.

3.2.1 Threatened and Endangered Species

Approximately 1300 endangered or threatened species occur in the United States today. Endangered species are plants and animals that have become so rare that they are in danger of becoming extinct or are considered extinct in the wild. Threatened species are plants and animals that are likely to become endangered within the foreseeable future throughout its range (Endangered Species Protection Program/EPA.gov). The Endangered Species Act of 1973 is designed to protect critically imperiled species from the consequences of anthropogenic activities. The Act is administered by the United States Fish and Wildlife Service and the National Oceanic and Atmospheric Administration.

In Kansas, state- and federal-listed species are protected by the Kansas Nongame and Endangered Species Conservation Act of 1975. The act places the responsibility for identifying and undertaking appropriate conservation measures for listed species directly on the Department of Wildlife, Parks, and Tourism. This is enforced through Chapter 32 Article 9, Sections 32-957 through 32-963, 32-1009 through 32-1012, and 32-1033 and regulations. Regulations require the Department of Wildlife, Parks, and Tourism to issue special action permits for activities that affect species listed as threatened or endangered in Kansas. (*Biological Baseline Report*)

Per the following stipulation included in the current update to the RMP the following statement will be applied to the BLM's helium pipeline in Kansas:

Black-Footed Ferrets in Kansas/Consultation Stipulation

“If black-footed ferrets occur anywhere in Kansas, they are presumed to be associated with prairie dogs.”

No prairie dogs or their habitat were observed in a site visit by BLM environmental staff on November 24, 2015. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.”

3.2.2 Special Status Species

The group of species referred to here, and in the attached biological evaluation, as special status species (SSS) includes federal and state listed threatened or endangered plant or animal species, species proposed for listing and species under review by the U. S. Fish and Wildlife Service (FWS), Kansas Department of Wildlife & Parks (KDWP). The authority for this policy and guidance regarding the evaluation of SSS comes from the Endangered Species Act of 1973, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; and Department of Interior, Bureau of Land Management, Special Status Species Management (Manual 6840). There are no Wilderness Study Areas (WSA's) or Special Management Areas (SMA's) within

the proposed area (Table 4). Burrowing owls are present and our August 2015 survey indicated approximately 16 individuals are using the prairie dog habitat.

The lesser prairie chicken has been identified by the Kansas State Department of Wildlife as a “species of concern” near the proposed helium pipeline, however Kansas State Wildlife biologist Jason Wagner has stated that the proposed pipeline would be on the very edge, within a mile of the boundary of the estimated occupied range. The lesser prairie chicken is considered a “species of concern,” however; we observed no leks or birds in the site visit of November 24, 2015 by Ms. Sundblad and Mr. Escobar with IACX’s Lorren Zimmerman.

3.2.3 Migratory Birds

The central flyway is a bird migration route that begins in the north in Canada and generally meanders along the Great Plains and goes through the Gulf of Mexico. Migrating birds use this flyway between breeding and wintering seasons and often use the region as a stop-resting and foraging ground. Common migratory bird species that occur near the proposed project area are too numerous to list in this document, however, migrating birds observed at the specific site are protected under the Migratory Bird Treaty Act of 1918. The Migratory Bird Treaty Act makes it unlawful, without a waiver, to pursue, hunt, take, capture, kill, or sell birds that are considered migratory. The statute does not discriminate between live or dead birds and also grants full protection to any bird parts including feathers, eggs, and nests. There are currently over 800 species on this list, several species of which have been observed in the proposed project area. Natural habitats for migratory birds in Kansas and Nebraska are short-grass prairie, central mixed-grass prairie, and eastern tall-grass prairie.

3.3 Noxious Weeds and Invasive Species

The *Biological Baseline Report* lists pages 2-15 – 2-29 varieties of noxious weeds and invasive species found in the Kansas, Texas, and Oklahoma area of potential impacts. It is not expected that the limited area of disturbance of a maximum of 3.3 acres will result in significant additional impacts from invasive species.

Mitigation

Reclamation and reseeded of the disturbed area by IACX will incorporate native grass species in a progressive growth sequence to optimize re-establishment of ground cover.

3.4 Archaeological Review

3.4.1 Cultural Resources

An archival records search was completed on November 27, by R. Doyle Bowman. Archival research utilizing the online the USGS map server <http://eros.usgs.gov/> and 1901 Kansas Pioneer Map, and information contained within professional archaeological reports accessed online via

the Kansas State Historic Society database and inventory to inform the proposed Archaeological survey. Archival research determined there were no previously recorded archaeological sites located within one-half (½) mile of the APE. However, examination of historic-period maps and aerial photographs of the APE did indicate the potential for encountering historic-period (19th and 20th century) cultural resources. There no known 1901 structures were located within one-half (½) mile. On the 1954 aerial photograph, three historic features are identifiable. The three identifiable historic features are the Mohr homestead, Trinity Lutheran Cemetery and the Missouri Pacific Rail Road. Listed within Rush County, Kansas are several NRHP properties or eligible properties. Within the APE, there are no NRHP or eligible properties.

To comply with Section 106 of the National Historic Preservation Act, as amended, an on-the-ground cultural resources survey was conducted. The study covered an area of 69.14 acres for the proposed pipeline. No prehistoric or historic period sites were recorded. The Mohr homestead, Trinity Lutheran Cemetery, and the Missouri Pacific Rail Road were identified as being within the APE but will be bored underneath or routed around to avoid potential impacts. Additionally, no additional research is recommended (CRR# NM-040-2016-18).

3.4.2 American Indian Religious Concerns

Traditional Cultural Properties (TCPs) are places that have cultural values that transcend the values of scientific importance that are normally ascribed to cultural resources such as archaeological sites. Native American communities are most likely to identify TCPs, although TCPs are not restricted to those associations. Some TCPs are well known, while others may only be known to a small group of traditional practitioners, or otherwise only vaguely known.

There are several pieces of legislation or Executive Orders that should be considered when evaluating Native American religious concerns. These govern the protection, access and use of sacred sites, possession of sacred items, protection and treatment of human remains, and the protection of archaeological resources ascribed with religious or historic importance. These include the following:

- The American Indian Religious Freedom Act of 1978 (AIRFA; 42 USC 1996, P.L. 95-431 Stat. 469).
- Executive Order 13007 (24 May 1996).
- The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA; 25 USC 3001, P.L. 101-601).
- The Archaeological Resources Protection Act of 1979 (ARPA; 16 USC 470, Public Law 96-95).
- Memorandum of Understanding Among the U.S. Department of Defense, U.S. Department of the Interior, U.S. Department of Agriculture, U.S. Department of Energy,

and the Advisory Council on Historic Preservation Regarding Interagency Coordination and Collaboration for the Protection of Indian Sacred Sites.

As described above, approximately 69.14 acres have been inventoried for cultural resources for the proposed access road, drill pad, and pipeline construction. The proposed action would result in short-term and long-term change and altered utilization of the site and immediate surrounding area.

For the Proposed Action, identification of TCPs were limited to reviewing existing published and unpublished literature, and BLM tribal consultation efforts specific to this proposed action with the Apache Tribe, the Cheyenne and Arapaho Tribes, the Kiowa Tribe, and to the Wichita and Affiliated Tribes. No TCPs are known to exist within the APE.

3.4.2 Paleontology

Approximately 69.14 acres have been inventoried for cultural and paleontological resources for the proposed access road, drill pad, and pipeline construction. No paleontological resources have been identified within the proposed project area. Paleontological Resources are of scientific interest and may require protection. The management of paleontological resources is directed under FLPMA, NEPA, and Paleontological Resources Preservation Act (PRPA), formally known as Paleontological Resources Preservation subtitle of the Omnibus Public Land Management Act of 2009 (16 USC 470aaa et seq.). In accordance with the PRPA, paleontological resources on Federal land must be managed and protected using scientific principles and expertise.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Effects from No Action

There would be no impacts or environmental consequences if no action is taken.

4.2 Effects of Proposed Action on Ecosystem and Mitigation Measures

We will examine direct and indirect and cumulative effects of both actions. We will examine the alternatives and mitigation measures appropriate. As part of this effort, the AmFO Planning and Environmental Coordinator, Cindy Sundblad and the AmFO Natural Resources Specialist, Adrian Escobar traveled to Otis, Kansas on November 24, 2015. We met with Lorren Zimmerman, ICAX Energy's Vice President of Operations to see the existing facilities and location of the proposed hot tap into the federal helium pipeline and proposed traverse for IACX pipeline.

The pipeline will be a 3-inch low-pressure line of polyethylene pipe. The high pressure from the federal helium pipeline will be regulated at the hot tap to accommodate the low pressure adjustment. All pipes, valves, regulators, meters at the IACX tap will be subject to BLM review and approval. The initial flow of gas will be small, estimated at 200,000 cubic feet per day (200 Mcfd) The estimated maximum flow given optimum helium sales and market conditions are estimated at 1,000,000 cubic feet per day (1 Mmcfd).

The approximate length of pipeline to be installed is 2.75 miles. Approximately three-quarters of the traverse is along a dirt road, thus minimizing off-road disturbance across the crop and pasture land to approximately one mile. The area of disturbance for the proposed pipeline is approximately 10 feet wide allowing for a pipeline installation machine to bore a foot-wide trench for the 3-inch pipeline. Therefore we estimate pipeline installation activity from the machine will result in approximately 2.4 acres of disturbance along the existing dirt road and 0.89 acres of off-road disturbance. The actual trenching is approximately one foot wide so that disturbance along the 2.75 mile traverse is approximately 0.33 acres.

Attachment 4 provides an overview of the IACX Energy plant site and perspective on the current operation and footprint of the facility.

Below are photos of the area taken by the BLM environmental staff on the site visit November 24, 2015 illustrate the landscape and area to be disturbed by installation of the 3-inch pipeline. Note the location marker for the helium pipeline and the surrounding croplands.



Photos by Cindy Sundblad, November 24, 2015

Mitigation to Ecosystem

The pipeline will be installed in the winter thus mitigating impacts to wildlife and land disturbance. This is considered a best management practice to reduce impacts from disturbance caused by pipeline construction.

4.2.1 Socioeconomic Effects of Proposed Action

One to two additional employees may be added with growth in the helium market. The number could increase as volumes of helium processed at the Otis, Kansas facility increase.

4.2.2 Process Changes Anticipated at Otis, Kansas Plant

Electrical usage will increase at the Otis natural gas processing facility. The entire process operates on electricity with no additional natural gas fired compression. There are currently gas fired compressors operating at the site, however they are used for the nitrogen rejection operation and not helium. Non-helium gas will be vented from the compressed helium stream (CH_e) with the hydrogen molecules removed via catalyst prior to emission.

4.3 Wildlife

The composition and population levels of the species of wildlife that are or could be using this habitat would go through seasonal and year-to-year fluctuations directly related to vegetation condition factors at the site. These adjustments would be exhibited by the wildlife populations present. Continuing threats to native ecosystems and species diversity in the planning area are fragmentation and loss of critical or important habitat due to human activities. This proposed action will not result in impacts from fragmentation or loss of habitat since the area disturbed will be mitigated and reclaimed.

Mitigation Common to All Species

Construction of the new pipeline will be limited to a 10 foot-wide corridor that will enable vehicles and equipment to move safely during installation and finishing of work. The area disturbed be reclaimed, recontoured and reseeded as closely as possible to pre-construction surface and appearance. Since the rights-of-way from landowners have been secured by IACX, they will be responsible to ensure that the landowners are satisfied with the final reclamation. The Council on Environmental Quality (CEQ) defines mitigation in its regulation at 40 CFR 1508.20 to include: “avoiding impacts, minimizing impacts, rectifying impacts, reducing or eliminating impacts over time, and compensating for remaining unavoidable impacts.”

Department of Interior policy is “to avoid and minimize impacts to resources and their values, services, and functions across landscapes and over time, apply best management practices as identified in regulation, policy, plans, strategies and project-level NEPA analysis.” We believe the proposal to construct the pipeline in the winter provides minimal impacts to resources in the already-disturbed roads and cropland area of central Kansas.

4.3.1 Threatened and Endangered Species

No known threatened or endangered species occur in the counties near the Kansas hot tap, proposed pipeline and existing natural gas processing facility. State and federal agencies were consulted as part of the BLM's 1996 RMP for information regarding county specifically listed threatened or endangered species. It is the policy of the BLM to follow federal and state guidelines set forth regarding species disturbance for planned spraying throughout the where the species occur at that point in time.

Mitigation

Based on our consultation with Kansas Parks and Wildlife, we do not anticipate finding any threatened or endangered species. The area was reviewed for the presence of federally and state listed special status species before hot tap and connected action activities including installation of the 3-inch pipeline, Surface disturbance will be limited to the least area possible. Any evidence of impacts to birds and critters that occurs during pipeline construction will be documented, along with mitigation actions. Mitigation, if needed, depends on the species impacted and may require discussion with state of Kansas or federal fish and wildlife authorities. However, because the pipeline construction will occur in winter, we do not anticipate encounters with wildlife.

4.3.2 Migratory Birds

Migratory birds occur throughout the area as the location of the Kansas facility is located in the central flyway. The list of migratory birds is too numerous to list in this document; however, birds common to the area have been observed and documented through state and federal wildlife departments.

Mitigation

The proposed site will not be impacted by migratory bird movement or encounters of migratory bird nests because the construction will take place in the winter between bird migration time-frames.

4.4 ARCHAEOLOGICAL EFFECTS

4.4.1 Cultural Resources

The Mohr homestead, Trinity Lutheran Cemetery, and the Missouri Pacific Rail Road were identified as being within the APE but must be bored underneath or routed around to avoid potential impacts. Should damage to these sites occur, the proponent will have to pay the full cost of archaeological damage assessments and mitigation recovery efforts as determined appropriate by the BLM staff archaeologist.

The proposed action would result in short-term and long-term change and altered utilization of the site and immediate surrounding area. After the literature review and on-the-ground survey, it was determined that no additional research is needed. A finding of no historic properties affected has been determined for all resources identified in the project area, as staked, at the time of survey. The Kansas State Historic Preservation Office has been consulted and Section 106 of the NHPA, as amended, compliance has been completed.

Many cultural resource issues exist beyond the National Historic Preservation Act, such as state and municipal registers of historic sites, National Heritage Areas, National Trails, or other heritage designations. This action does not affect any of these other types of cultural resources.

4.4.2 American Indian Religious Concerns

The Apache Tribe, the Cheyenne and Arapaho Tribes, the Kiowa Tribe, and to the Wichita and Affiliated Tribes of Oklahoma were notified of the proposed project. The Cheyenne and Arapaho Tribes responded that they have no current listings in the project area.

The proposed action is not known to physically threaten any TCPs, prevent access to sacred sites, prevent the possession of sacred objects, or interfere or otherwise hinder the performance of traditional ceremonies and rituals pursuant to AIRFA or EO 13007. There are currently no known remains that fall within the purview of NAGPRA or ARPA that are threatened by leasing. It is anticipated that implementation of either alternative would have no impact on the resource.

4.4.3 Paleontology

No concentrations of vertebrate fossils or bone beds are known to occur within the APE, and there is a very low probability of any occurring within the APE, thus there would be no impact from implementation of either alternative.

Mitigation Common to ALL Heritage Resources

In the event that development practices are found in the future to have an adverse effect on significant heritage resources, including cultural, TCPs, or paleontological, the operator and the BLM, in consultation with the affected tribe(s), the Kansas State Historic Preservation Office, will take action to mitigate or negate those effects. Measures include, but are not limited to physical barriers to protect resources, relocation of practices responsible for the adverse effects, or other treatments as appropriate.

If additional ground disturbance is required outside of the currently proposed APE, a BLM archaeologist must be notified prior to any additional work. If archeological or paleontological material such as chipped stone tools, pottery, bone, historic ceramics, glass, metal, or building structures are exposed; stop work at that spot immediately and contact the BLM archeologist at (918) 621-4153 or (918) 621-4100.

If archeological materials such as chipped stone tools, pottery, bone, historic ceramics, glass, metal, or building structures are exposed during construction; stop work at that spot immediately and contact the BLM archeologist at (918) 621-4100. In these situations, the Kansas Antiquities Act (K. S. A. 74-5401 through 74-5408) may apply and its procedures followed.

If human remains are discovered the procedures of the Kansas Unmarked Burial Sites Statute and Regulations (K. S. A 75-2741 through 75-2754) or the NAGPRA shall apply, as appropriate.

4.5 CUMULATIVE EFFECTS

There may be short-term impacts to resident wildlife that may traverse the properties during installation of the small helium transfer pipeline across the largely undisturbed pasture land. The area is surrounded by active farm land and does not provide good wildlife habitat due to the frequent disturbances related to farming activities. Special status species are not known to occur in the area. Construction activity will occur in the winter and reduce the potential for impact on wildlife, migrating birds and erosion of disturbed area. Mitigation by recontouring and seeding the disturbed land surface of the approximately 3.3 acres along the road and across the pastureland will prevent erosion during spring melting and runoff. No negative long-term effects from increased helium operations are anticipated, including emission sources or from socioeconomic impact.

5.0 CONSULTATION/COORDINATION

Consultation and coordination for development of this environmental assessment includes the resource specialists located within the AmFO and the Oklahoma Field Office that provided input in review and documentation of the proposed project and development of this EA.

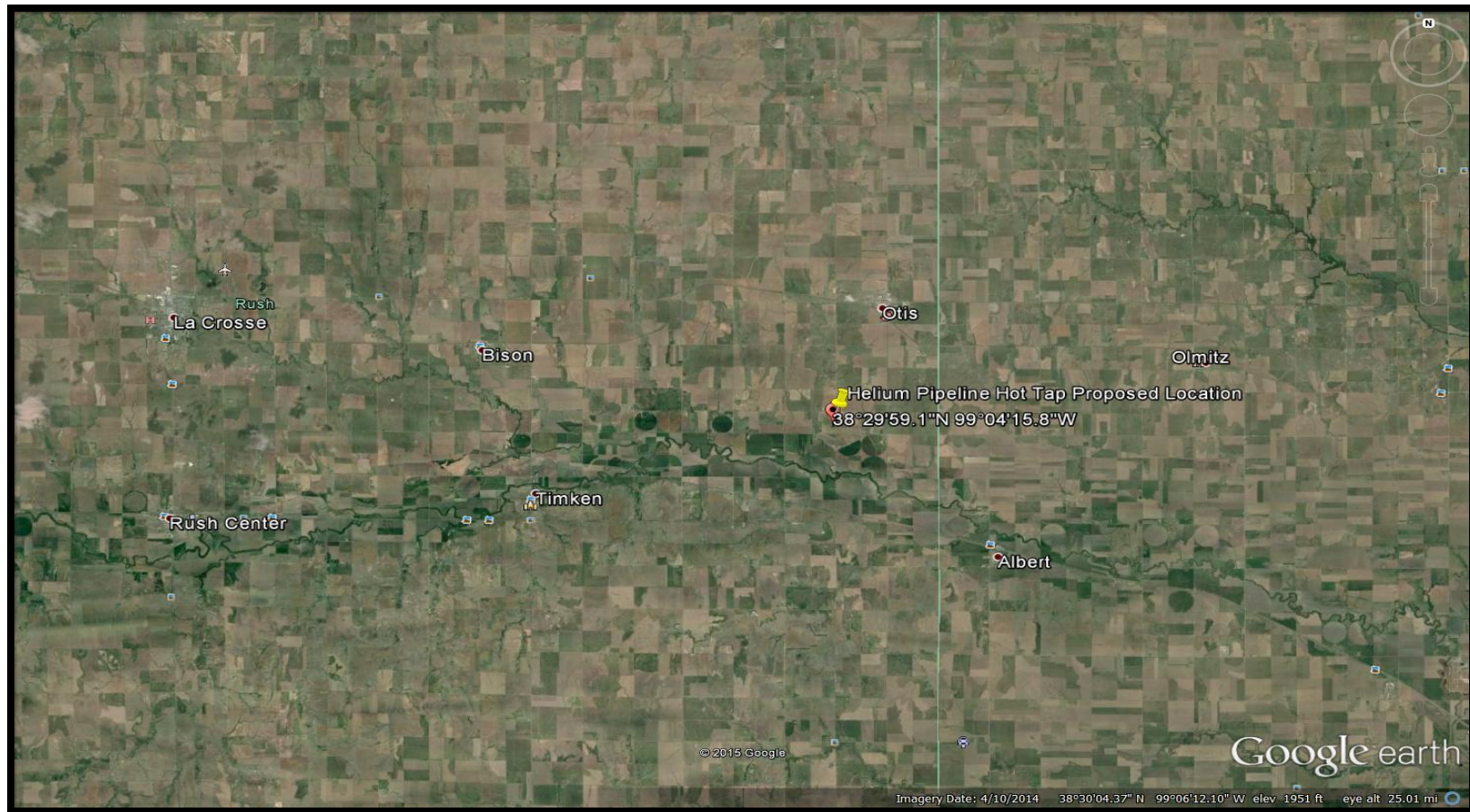
Email exchange between Adrian Escobar, BLM AMFO Natural Resource Specialist and Jason Wagner, Kansas Department of Wildlife, Parks and Tourism Area Wildlife Biologist, Hays Regional Office, November 17, 2015.

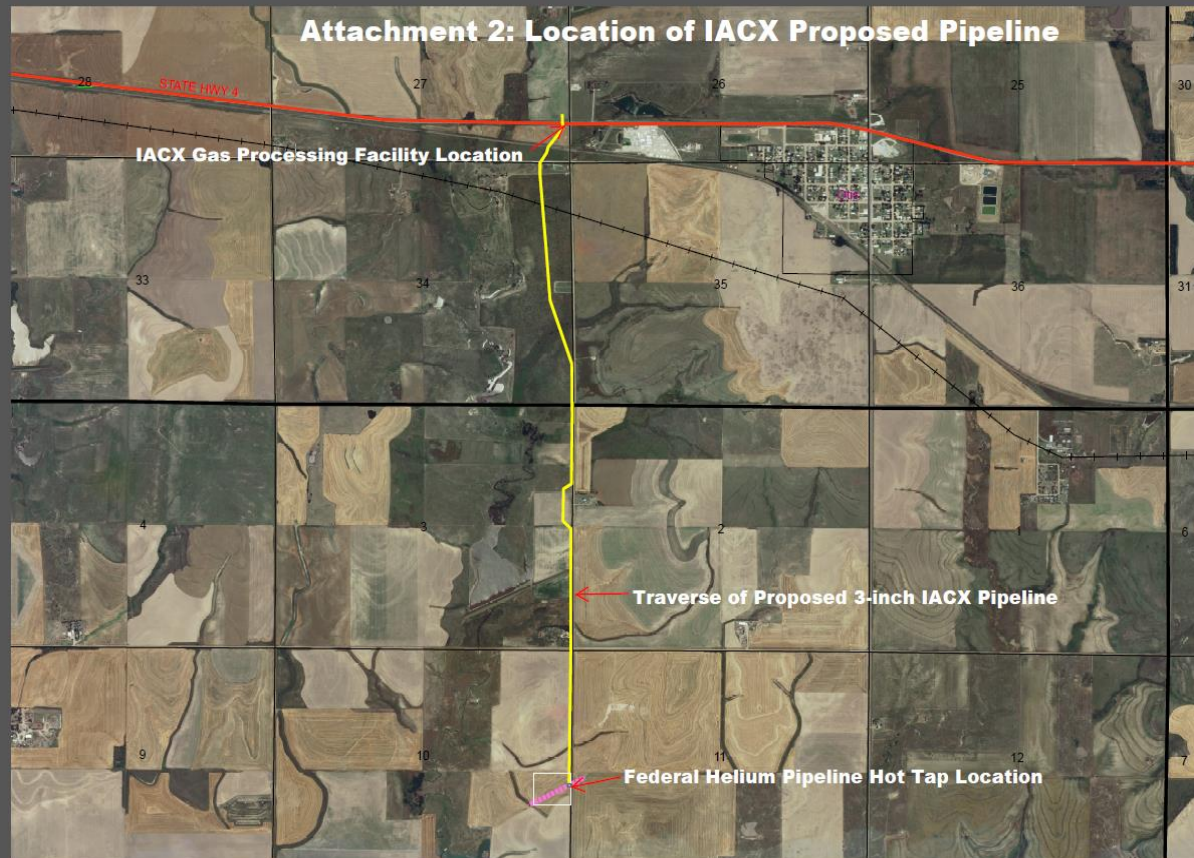
Ryan Howell, Archeologist, BLM Tulsa Office. Section 106 of the National Historic Preservation Act consultation with Kansas State Historical Society, the Apache Tribe, the Cheyenne and Arapaho Tribes, the Kiowa Tribe, and to the Wichita and Affiliated Tribes.

6.0 REFERENCES

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2. Assal, T. J., C. P. Melcher, and N. B. Carr (editors). 2015. Southern Great Plains Rapid Ecoregional Assessment—Pre-Assessment Report: US Geological Survey Open-File Report 2015–XXXX.
3. Joint Environmental Impact Statement and BLM Resource Management Plan and BIA Integrated Resource Management Plan May 2015, ***BIOLOGICAL BASELINE REPORT, US Department of the Interior, Bureau of Land Management, Oklahoma Field Office, Amarillo Field Office***
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5. Mulhern, D. W., and C. J. Knowles. 1995. *Black-tailed prairie dog status and future conservation planning*. Rocky Mountain Range and Experiment Station Technical Report. RM-GTR-298.
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9. Department of Interior Secretarial Order 3330, “Improving Mitigation Policies and Practices of the Department of Interior” dated October 31, 2013.
10. Department of Interior Manual Release, “Landscape-Scale Mitigation Policy” 600 DM 6, October 23, 2015.
11. Presidential Memorandum: “Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment,” November 3, 2015.

ATTACHMENT 1: LOCATION OF PROPOSED HELIUM PIPELINE TAP IN RUSH COUNTY, KANSAS





ATTACHMENT 3: Proposed Location for Hot Tap into the Federal Helium Pipeline



Attachment 4: Location of IACX Energy Processing Plant Near Otis, Kansas

